



project.org

STUDENT HANDOUT

YELLOW LEVEL
GRADE LEVEL

Vision Training for Athletes

Grades 5–8 • PE

ADMIT ONE

NAME

DATE

CLASS

Training your visual system. Elite athletes don't just train muscles—they train their visual processing systems. The difference between good and great often comes down to milliseconds of visual reaction time or inches of depth perception accuracy.

PART 1

OI

Performance data

Station 1: Depth perception test

CONDITION	TRIAL 1	TRIAL 2	AVERAGE
Both eyes open	___/5	___/5	___/5
Right eye only	___/5	___/5	___/5
Left eye only	___/5	___/5	___/5

Analysis: Which eye performed better alone? Why might that be?

Station 2: Peripheral vision map

How far back could you detect the ball (estimate in degrees from center)?

Left side: _____° Right side: _____°

Total peripheral range: approximately _____° (Most people's eyes together cover about 180°!)

Station 3: Reaction time

Score: _____ / 10 correct Which response was slowest (clap/jump/touch ground)? _____

Why do you think that one was harder?

O2

PART 2

Sport application

Choose a sport you play or enjoy watching: Sport: _____

Depth perception matters because:

Peripheral vision matters because:

Reaction time matters because:

O3

PART 3

Compare your results

How did your performance change between conditions?

Depth perception drop (both eyes vs. one eye): _____ catches lost

Peripheral vision difference (left vs. right):
_____° difference

What does this tell you about your visual strengths and weaknesses?

O4

PART 4

Training plan

Based on your results, which visual skill would benefit you most to train?

How could you practice this skill at home?

MINI MUSEUM CONNECTION

The stereoscope exploits **binocular disparity**—the difference between what each eye sees. Calculate: If your eyes are 6 cm apart and a ball is 10 meters away, each eye sees it from a slightly different angle. Your brain uses this difference to calculate distance in milliseconds!

Visit: minimuseumproject.org/exhibitions/seeing-is-deceiving

REAL ATHLETES, REAL TRAINING

Many professional teams now include vision training. For example:

- Baseball players use light board training to improve reaction time
- Hockey goalies practice peripheral awareness drills daily
- Tennis players train eye tracking to follow fast serves

SHARE WITH YOUR FAMILY

Home training: Practice the reaction time drill with family members using TV remote buttons (mute = clap, volume up = jump, etc.). Track improvement over a week!